trunks, that do not involve collocation.[57] These same methods could also permit a carrier to access the unbundled network element of an ILEC, in essence using the trunks as some sort of super cross-connect.[58] Thus, if, indeed, the inquiry was simply whether collocation is "required" or "indispensable" to interconnect or to access a UNE from the standpoint of network architecture, the answer in many cases arguably might be "no."[59] But the inquiry is not so limited because the statutory purposes of the 1996 Act are not so narrow. The structure of the Act makes clear – and four years of experience has shown – that collocation under 251(c)(6) is a means of implementing interconnection under 251(c)(2) and access to UNEs under 251(c)(3). Any interpretation of the Act must proceed accordingly or there would be little substance to Section 251(c)(6) and the pro-competitive provisions of Section 251 would be undermined.

The purpose of Section 251(c)(6), to further the statutory objectives of Sections 251(c)(2) and 251(c)(3), has previously been recognized by the Commission. As the Commission stated in the *Local Competition First Report and Order*: "both the interconnection and unbundling sections of the Act, *in combination with the collocation obligations imposed by Section 251(c)(6)*, allow competing carriers to choose technically feasible methods of achieving interconnection or access to unbundled network elements."[60] More pointedly, the Commission "conclude[d] that, under Sections 251(c)(2) and 251(c)(3), any requesting carrier may choose *any* method of technically feasible interconnection or access to unbundled elements at a

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57 *Id.* at 15779-82; *see also Bell-Atlantic New York Application for Section 271 Authority*, 15 FCC Rcd 3979, ¶ 66 (1999) (technically feasible networks of interconnection include interconnection trunking, meet point arrangements, and collocation).

58 *Local Competition First Report and Order*, 11 FCC Rcd at 15719-15720, ¶ 444.

59 *See infra* note 73 and accompanying text.

60 11 FCC Rcd at 15588, ¶ 172 (emphasis added).

particular point."[61] In other words, if the objectives of these two sections are to be met, Section 251(c)(6) cannot be interpreted in the strictest sense within the vacuum of only its own terms. Rather, Section 251(c)(6) must be read in the context of Section 251(c) as a whole and to support its pro-competitive goals.

The subservience of Section 251(c)(6) to the objectives of Sections 251(c)(2) and 251(c)(3) is further illustrated by the competitive checklist in Section 271 of the Act of items that Bell operating companies must meet before they are permitted to provide in-region interLATA service. Under the checklist, Bell operating companies are required to provide interconnection and access in accordance with Sections 251(c)(2) and 251(c)(3) of the Act, but the checklist is silent as to any requirement to provide physical collocation.[62] The reason for this is that the Section 251(c)(6) obligation to provide physical and virtual collocation supports and furthers the objectives of Sections 251(c)(2) and 251(c)(3).[63]

2. SECTION 251(C)(6) WAS REQUIRED IN ADDITION TO SECTIONS 251(C)(2) AND 251(C)(3) TO ENSURE THE COMMISSION HAD THE REQUISITE AUTHORITY TO ORDER COLLOCATION

If physical and virtual collocation are only two types out of a greater number of methods of interconnection and access to UNEs of those contemplated by Sections 251(c)(2) and 251(c)(3), a strict interpretation of "necessary" would raise the issue of why Section 251(c)(6)

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61 11 FCC Rcd at 15779, ¶ 549.

62 *See* 47 U.S.C. § 271(c)(2)(B).

63 For example, the Commission when approving the Bell Atlantic New York request for Section 271 Authority stated that "[t]he provision of collocation is an essential prerequisite to demonstrating compliance with item 1 [interconnection under Section 2451(c)(2)] of the competitive checklist." *Bell Atlantic New York Application for Section 271 Authority* 15 FCC Rcd 3979, ¶ 66, (1999). *See also BellSouth (Louisiana) Application for Section 271 Authority*, 15 FCC Rcd 4035, ¶163 (1998)(absence of definite terms and conditions for collocation caused BellSouth to fail item 2 [access to UNEs under Section 251(c)(3)] of the checklist).

was required at all? The answer is straightforward and further illustrates why a narrow reading would be innappropriate. As the Commission recognized in its *Local Competition First Report and Order*, before the 1996 Act, its attempts to require ILECs to offer physical collocation foundered because the Act did not give the Commission specific statutory authority necessary to order what the D.C. Circuit thought would likely be a taking of ILEC property.[64] The Commission found in that *Order* that the question of such authority "largely evaporates" in the context of the 1996 Act, and Section 251(c)(6) in particular.[65] The D.C. Circuit in *GTE v. FCC* agreed.[66] The objective of Section 251(c)(6) is not simply to provide for physical or virtual collocation *per se* when no other method of collocation is available, however, but to promote competition by allowing for collocation that furthers the larger statutory purpose that requesting carriers be able to choose from among the various technically feasible methods of interconnection and access to UNEs.[67]

Stated otherwise, the structure of Section 251 taken as whole inevitably leads to the following conclusions: one, Congress intended that the ILECs permit interconnection and provide access to unbundled network elements; two, Congress, preserving the rulemaking authority of the Commission under Section 201(b), intended the Commission as an expert agency adopt rules and regulation consistent with the Act "as may be necessary in the public interest to

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64 *Local Competition First Report and Order* 11 FCC at 15809 ¶ 613, 15810-11 ¶ 615 (citing *Bell Atlantic v. FCC*, 24 F. 3d 1441 (D.C. Cir. 1994)).

65 *Id.* at 15811, ¶ 616.

66 205 F. 3d at 419-20.

67 *Local Competition First Report and Order*, 11 FCC Rcd at 15779, ¶ 550 (CLECs must be able to choose *any* method of interconnection or access to UNE).

carry out the provisions of [the] Act," including Section 251(c);[68] three, Section 251(c)(6) is intended to further Sections 251(c)(2) interconnection and Section 251(c)(3) unbundling;[69] and four, that absent the need for express statutory authority for physical collocation identified in *Bell Atlantic v. FCC*, Section 251(c)(6) would be mere surplusage relative to Sections 251(c)(2) and 251(c)(3).

In this context, Section 251(c)(6) therefore authorizes the Commission to order physical collocation that the Commission deems necessary to fulfill the requirements of Sections 251(c)(2), interconnection, and 251(c)(3), access to network elements. The inescapable implication of the Commission's reading of the *Bell Atlantic v. FCC* decision is that, without Section 251(c)(6) or similar express statutory authority, it would not be possible for the Commission to impose physical collocation rules and regulations as necessary to ensure that ILECs meet their interconnection and unbundling obligations under Sections 251(c)(2) and (c)(3) of the Act and the pro-competitive purposes of these section.[70] Properly seen, therefore, because collocation is a method both of interconnection and of access to UNEs, Section 251(c)(6) is necessary to ensure that the goals and objectives of Sections 251(c)(2) and 251(c)(3) could be achieved. Concomitantly, Section 251(c)(6), in general, and the term "necessary," in particular,

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68 47 U.S.C. § 201(b). *See also* 47 U.S.C. § 251(i)(Commission's authority under Section 201 preserved). In *AT&T Corp. v. Iowa Utilities Board*, the U.S. Supreme Court recognized that Section 201(b) gave the Commission the authority to adopt rules and regulations to implement the provisions of Sections 251 and 252 of the Act. 525 U.S. at 377-85. That authority extends to the authority to adopt regulations implementing Section 251(c)(6), as well as Sections 251(c)(2) and 251(c)(3) and the pricing provisions of the Act.

69 As the Commission recognized in the *Local Competition First Report and Order and Advanced Services First Report and Order*, collocation is a primary method by which CLECs achieve interconnection and access to unbundled network elements. *See also* 47 C.F.R. §51.321(b).

should be interpreted, in conjunction with the Commission's general rulemaking authority in Section 201(b), as empowering the Commission to require ILECs to permit physical collocation as the Commission deems necessary to achieve the goals of the Act. Accordingly, the Commission should define the provision "physical collocation of equipment necessary for interconnection or access to unbundled network elements" to mean collocation of equipment needed to fulfill the requirements of the sections that define interconnection and access to network elements, Sections 251(c)(2) and (c)(3), respectively.[71] In short, in addition to the more general provisions of Sections (c)(2) and (c)(3) which are sufficient for the Commission to order that non-collocation methods be made available, Section 251(c)(6) is required if collocation is to be among the choices that a CLEC has to interconnect or obtain access to UNEs.

3. THE INTERPRETATION URGED BY THE JOINT COMMENTERS IS CONSISTENT WITH THE D.C. CIRCUIT'S INSTRUCTIONS THAT SOME LIMITING STANDARDS BE APPLIED

Significantly, the interpretation the Joint Commenters urge here takes heed of the D.C. Circuit's admonition that the obligation to allow physical collocation not be unlimited, but related to the statute's purposes.[72] Numerous limitations are inherent in both the interconnection and unbundling provisions of the Act, as well as Section 251(c)(6) itself. First, physical collocation is not an obligation where it is impractical because of space limitations. 47 U.S.C. §251(c)(6). Second, physical collocation is not required where it would be technically infeasible.

(...continued)

70 *See Local Competition First Report and Order* 11 FCC Rcd at 15809, ¶ 613. *See also BA v. FCC*, 24 F. 3d at 1446-47.

71 The centrality of these objectives to Congressional interest is that the FCC may not forbear from enforcing Sections 251(c)(6) – as well as 251(c) in general – until its "requirements have been fully implemented." 47 U.S.C §10(d).

72 *GTE v. FCC*, 205 F. 3d at 424.

47 U.S.C. §§251(c)(2)(6), 251(c)(3) and 251(c)(6). Third, only telecommunications carriers are entitled to collocation. 47 U.S.C. §§251(c)(2), 251(c)(3), and 251(c)(6). Fourth, where the collocation is to be used for interconnection purposes, such interconnection must be for the transmission and routing of local exchange service or exchange access. 47 U.S.C. §251(c)(2)(A). Fifth, where the collocation is being used to access UNEs, such UNEs must be used for the provision of a telecommunications service. 47 U.S.C. §251(c)(3).

The foregoing standards ensure that physical collocation rules, as advocated herein, will be closely related to the statutory purposes of Sections 251(c)(2) and (3), thereby setting limiting parameters on the definition of "necessary" in particular, and the ILEC obligation in Section 251(c)(6) in general, to satisfy the admonitions of the Supreme Court and D.C. Circuit. Any further restrictions would be impermissible under the plain language of the Act and in insoluble tension with the pro-competitive objectives of the Act and Sections 251(c)(2) and 251(c)(3). The Commission should resist any temptation to add further limitations or restrictions on its interpretation of these key market-opening provisions as they are not warranted under the statute.[73]

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[73] If "necessary" is interpreted in some narrow fashion such as "required or indispensable," such that Section 251(c)(6) applies solely to the equipment types that represent the physical minimum that permit interconnection or access to UNEs, section 251(c)(6) would be rendered meaningless. As the FCC found in the *Local Competition First Report and Order*, collocation *per se* is not absolutely required if the reference to "necessary for interconnection or access to unbundled network elements" in Section 251(c)(6) is limited to some bare bones method of interconnection or access; there are alternative methods for providing interconnection and access, *i.e.*, "meet point" interconnection. Thus, if "necessary" modifies the equipment without which a CLEC could not obtain interconnection or access, as opposed to physical collocation required to meet ILEC obligations imposed by sections 251(c)(2) and (c)(3), than arguably in my circumstances *no* equipment would meet the requirements of section 251(c)(6). As a result, one would be led to the absurd conclusion that collocation for interconnection and access to UNEs is not permitted pursuant to section 251(c)(6) because collocation is not, strictly speaking, indispensable for interconnection or access. If "necessary" were read in this strictest sense, then the obligations of an ILEC to provide for collocation might be
(continued...)

* * *

Four years of CLEC experience with trying to obtain physical collocation underscore that collocation is a vital means of interconnection and access to UNEs if competition is to take hold. The rules of statutory construction require that the Commission give meaning to this provision of the statute consistent with the context and overall purpose of the Act. Because the strict application of the term "necessary" to refer to only that equipment indispensable for interconnection or access to UNEs renders Section 251(c)(6) all but meaningless and will not further these statutory purposes, it would be unreasonable to interpret the term narrowly in the circumstances. Instead, Section 251(c)(6) should be read to authorize physical collocation that the Commission deems required to fulfill the goals of Section 251(c), including the collocation of any equipment without which the Commission concludes that the ILECs cannot satisfy their obligations under Sections 251(c)(2) and (c)(3) and the pro-competitive objectives of the Act cannot be achieved. What that means is discussed more fully below.

C. REQUESTING CARRIERS MUST BE PERMITTED TO COLLOCATE ANY EQUIPMENT THAT THEY INTEND TO USE FOR INTERCONNECTION OR ACCESS TO UNES AND TO TTILIZE ALL FUNCTIONS RELATED TO THESE OPERATIONS

As explained above, ILECs must provide physical collocation to the extent the Commission deems required to further the goals and objectives of Sections 251(c)(2) and 251(c)(3). Previously, in the *Local Competition First Report and Order* and the *Advanced Services First Report and Order*, the Commission required ILECs under Section 251(c)(6) to permit physical collocation of the following types of equipment:

(...continued)
little more than those applying to all carriers under Section 251(a) – *i.e.*, collocation would be strictly voluntary -- and Section 251(c)(6) would impermissibly be rendered
(continued...)

- Transmission equipment, including optical terminating equipment, concentration equipment, and multiplexers.[74]

- DSLAMs, routers, ATM multiplexers, remote switching modules and other equipment used to interconnect with an ILEC or to access unbundled network elements for the provision of telecommunication services.[75]

Provided that such collocated equipment is used for such interconnection or access, the *Advanced Services First Report and Order* permitted the collocating carriers to use other functions integrated into such equipment, including switching and enhanced services functionality.[76]

There has been no debate from the ILECs that they must accommodate physical collocation of basic transmission equipment of the sort described in the first bullet above. Indeed, collocation of this type of equipment was expressly required in the *Local Competition First Report and Order,* and the ILECs did not appeal that finding.[77]

The debate revolves around integrated and multifunction equipment that not only provides for direct access to UNEs and/or interconnection, but has other related functionality as well. The regulatory treatment of such equipment is particularly important for the development of competition because modern technology is eradicating the need for separate transmission, multiplexing, switching, and information services equipment, to name a few examples. The Commission has already recognized that equipment integrating multiple functions is more

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meaningless. *See Moskal v. US*, 498 U.S. 103, 109-110 (1990) (there is an interpretive obligation to try to give meaning to all the statutory language).

74 *Local Competition First Report and Order* 11 FCC Rcd at 15794, ¶580.

75 *Advanced Service First Report and Order* 14 FCC Rcd at 4776-4777 ¶28.

76 *Id.* at 4777-4778 ¶29.

77 *See Local Competition First Report and Order*, 11 FCC Rcd at 15799, ¶ 580.

efficient and cost effective. Such equipment also facilitates the provision of a broader range of services.[78]

The Joint Commenters submit that provided the equipment a CLEC seeks to collocate is deployed for purposes of access to UNEs and/or interconnection and meets minimum threshold requirements, such as NEBS Level 1 safety standards,[79] the burden should be on the ILEC to demonstrate that collocation of such equipment should not be allowed. To succeed, ILECs must show that the requested collocation is not technically feasible, is impractical because of space limitations, or violates other bases expressly in the Commission's rules, namely that the collocation of such equipment is not required to "fully implement" the provisions and objectives of Sections 251(c)(2) and 251(c)(3).

Unless such equipment as described above, and equipment that provides similar functionality, is permitted under the rules the Commission adopts in this proceeding, the goals and objectives of Sections 251(c)(2) and 251(c)(3) will be frustrated for several reasons:

First, CLECs will not be able to compete effectively with ILECs because they will either be unable to provide the same services as the ILEC in all cases or the cost of providing services will increase unreasonably, giving ILECs an insurmountable and discriminatory competitive edge. For example, as the Commission recognizes, in order to provide xDSL services, a carrier's DSLAM cannot be located beyond a certain distance from the end user and the equipment must have direct access to the copper loop.[80] In most instances, this

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78 *See Advanced Services First Report and Order*, 14 FCC Rcd at 4775, 4777-4778, ¶¶ 26, 29.

79 *Id.* at 4780-81, ¶¶ 34-35.

80 *See UNE Remand Order*, at 15 FCC Rcd at 3838-3839, ¶313 ("xDSL services generally may not be provisioned over fiber facilities. . . . We agree that if a requesting carrier is unable to install its DSLAM at the remote terminal or obtain spare copper loops (continued...)

will require collocation or the CLEC will have to construct its own loop facilities, a requirement Section 251(c)(3) was meant to obviate (subject to the necessary and impair standards of Section 251(d)). Thus, in order to use interconnection or access to UNEs, to compete with ILECs, collocation of certain equipment must be permitted in the ILEC premises.[81]

Notably, the "additional" functionalities being described herein are those the CLEC would have no reason to utilize if the equipment were not also being used for interconnection with the ILEC network or access to UNEs. Thus, for example, integrated switching functionality will act on traffic that is exchanged with the ILEC network (interconnection) or over unbundled loops and/or transport (access to UNEs). Accordingly, such functions in addition to basic transmission functions are, in any reasonable sense of the words, used for interconnection or access to UNEs and their deployment is inextricably related to the purposes of Sections 251(c)(2) and 251(c)(3).[82]

If collocation of modern integrated or multifunction equipment is denied, competitors' costs will increase unnecessarily, denying CLECs a meaningful opportunity to compete. Denying CLECs the ability to collocate such equipment will force CLECs to buy multiple pieces of less efficient, single function equipment, only some of which may be

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necessary to offer the same level of quality for advanced services, the incumbent LEC can effectively deny competitors entry into the packet switching market."). Notably, the decision by the FCC in some circumstances to not make certain advanced service UNEs available, such as packet switching and permanent virtual circuits, was predicated on the ability of CLECs *to collocate* DSLAMs and related multifunction equipment in ILEC premises. *Id.* at 3838-3839, ¶ 313.

81 The need for collocation in the remote terminals of ILECs to provide certain advanced services is discussed more fully below in Section VIII.

82 The D.C. Circuit, in *GTE v. FCC*, referred to "straw man" integrated functionalities such as payroll or data collection unrelated to interconnection or access to UNEs. 205 F. 3d at
(continued...)

collocated (under such a narrow interpretation), despite the fact that the functions of the integrated equipment all intricately relate to interconnection or access to UNEs. In addition to the expenditures for additional pieces of equipment, a CLEC's associated land and building costs to achieve the same functionality will increase if it cannot collocate integrated or multi-function equipment but must find space both in and outside of ILEC premises for multiple pieces of equipment. The CLEC will also incur the additional costs of unnecessary transport and cross connections between these multiple pieces of equipment. Further, because of these connections, additional points of failure will be needlessly introduced into CLEC network architectures. As the Commission stated when it rejected efforts by the ILECs to require intermediate single point of termination ("SPOT") frames and other arrangements between unbundled elements and collocated equipment, additional points of failure are unnecessary and introduce inefficiencies into the networks of competitors.[83] Moreover, as the D.C. Circuit recognized in *GTE v. FCC*, economic and operational factors such as these are properly considered when ascertaining whether the Commission's rules further the statutory purposes of the Act.[84]

Second, if ILECs are not required to permit collocation of such multifunction equipment, ILECs will be given an enhanced, if not inherent, ability to discriminate against CLECs in violation of Sections 251(c)(2), 251(c)(3), and 251(c)(6) of the Act. Specifically, ILECs will be capable of discriminating because, unlike CLECs, they will be able to install and use the most efficient technology and equipment to access network elements directly. Section

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(...continued)
424. The Joint Commenters are unaware of any desire of CLECs to have such functionalities integrated into collocated equipment.

83 *See Advanced Service Order* 14 FCC Rcd at 4784-4785 ¶ 42.

84 205 F. 3d at 425.

251(c)(3) prohibits ILECs from providing access to UNEs discriminatorily. The Commission recognizes that the nondiscrimination requirement is met only if the elements *and the access to those elements* that CLECs receive are of the same quality as the elements and access thereto that *the ILEC itself enjoys*:[85]

> [T]he phrase "nondiscriminatory access" in Section 251(c)(3) means at least two things: first the quality of an unbundled network element that an incumbent LEC provides, *as well as the access provided to that element,* must be equal between all carriers requesting access to that element; second, where technically feasible, the access and unbundled network element provided by an incumbent LEC must be at least equal in quality to that *which the incumbent LEC provides to itself.*[86]

Moreover, as the Commission noted in the *Local Competition First Report and Order*, "because Section 251(c)(3) includes the terms 'just' and 'reasonable,' this duty encompasses more than the obligation to treat carriers equally."[87] Specifically, Section 251(c)(3) requires that the means of access to unbundled elements, as well as the elements provided, must give carriers a "meaningful opportunity to compete" with the ILEC.[88] As noted above, if CLECs, unlike ILECs, are required to incur the additional and unnecessary equipment, space, and transport costs described above – as well as introduce additional points of failure into their networks — in order to interconnect with ILEC, and access UNEs to provide telecommunication services, they will be denied such a meaningful opportunity to compete.

Similarly, the Commission concluded that the term "discriminatory" as used in Section 251(c)(2) "applies to the terms and conditions [of interconnection] that an incumbent

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85 *Local Competition First Report and Order* 11 FCC Rcd at 15657, ¶ 312.

86 *Id.* (emphases added).

87 *Id.* at 15660, ¶ 315.

88 *Id.*

recognize the needs of ILECs to reserve space to meet the future requirements of their customers, those needs must be balanced against the needs of competitors to gain access to valuable central office space, and against the interest of the Commission in ensuring that the CLECs have an opportunity to compete. As such, the suggestions of some ILECs that they must be able to reserve space for their equipment for as long as 10 years[158] are simply unreasonable.

Under these circumstances, the establishment of national standards on collocation space reservation would serve the public interest. In establishing these standards, the Commission should follow the lead of those states such as California,[159] Florida,[160] Texas,[161] and Washington[162] that have already adopted space reservation policies. Based on the approaches of these states, the Joint Commenters submit that the Commission should permit reservations of space by ILECs to 12 months for transmission equipment[163] (including but not limited to concentration equipment, multiplexers, and multifunction or integrated equipment performing,

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158 SBC Communications, Inc. Opposition to Sprint's Petition for Partial Reconsideration and/or Clarification in CC Docket No. 98-147, July 12, 1999, at 9.

159 *Rulemaking on the Commission's Own Motion to Govern Open Access to Bottleneck Services and Establish a Framework for Network Architecture Development of Dominant Carrier Networks,* Decision 98-12-069, Rulemaking 93-04-003 (Cal. PUC Dec. 17, 1998) *("California Commission Order").*

160 *In re Petition of Competitive Carriers for Commission Action to Support Local Competition in BellSouth Telecommunications, Inc. Service Territory,* Docket No. 981834-TP, Order No. PSC-00-0941-FOF-TP (Fla. PSC May 11, 2000 *("Florida Commission Order").*

161 *Investigation of Southwestern Bell Telephone Company's Entry Into the Texas InterLATA Telecommunications Market, Project No. 16251,* Order No. 59 Approving Revised Physical and Virtual Collocation Tariffs (Texas PUC Oct. 29, 1999) *(Texas Commission Order No. 59).*

162 *In re MFS Communication Company, Inc., Petition for Arbitration Pursuant to 47 U.S.C. § 252(b) of the Interconnection Rates, Terms and Conditions with U S West Communications, Inc.,* Docket No. UT-960323 (Wash. Util. and Trans. Comm. Sept. 11, 1998) *("Washington Commission Decision").*

163 *See Texas Commission Order No. 59* at 3; *Washington Commission Decision* at ¶11; *California Commission Order* at 187.

inter alia, transmission functions) and to 18 months for all other equipment, *e.g.*, pure switches.[164] Non-ILECs (including ILEC affiliates and subsidiaries) should be allowed to reserve space for no more than 12 months, since the types of equipment they are permitted to collocate are either transmission equipment or multifunction or integrated equipment. Such reservations must be supported by legitimate and demonstrable anticipated need and should be subject to challenge by CLECs on an expedited basis. Moreover, the Commission should also make clear that ILECs may not deny requests for physical collocation in specific space (per the procedures set forth in Section IV. B.3., *supra,* on the basis that the space is reserved for virtual collocation.[165]

Adopting the national space reservation standards proposed herein will help ensure that central office space is used in an efficient manner and that CLECs have the ability to reserve space and enter new markets, thereby promoting competition to the ultimate benefit of U.S. consumers.

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164 *See Florida Commission Order* at 93.

165 *See Washington Commission Decision* at 57. As rereferenced in the attached letter (Attachment 1) from Edward A. Yorkgitis, Jr., Counsel for Light Networks, to Raelynn Tibayan Remy, Deputy Division Chief, Investigations and Hearings, Enforcement Bureau, FCC, dated February 11, 2000, page 2, at least one carrier has requested cageless collocation at the same office. While the Joint Commenters understand that BellSouth has accomodated Light Networks to its satisfaction in resolving the disputes in this letter, the Commission should make clear that CLECs cannot be denied cageless collocation and offered virtual collocation as a substitute.

VII. CONSISTENT WITH THE TECHNOLOGY NEUTRAL UNDERPINNINGS OF THE ACT, THE COMMISSION SHOULD CLARIFY THAT ILECS MUST PROVIDE ACCESS TO *ALL* UNBUNDLED LOOPS, INCLUDING LOOP ELECTRONICS AND TRANSMISSION EQUIPMENT PROVIDING DWDM OR SIMILAR MULTIPLEXING FUNCTIONALITY

In the *Fifth FNPRM* the Commission seeks comment on whether it should amend its loop unbundling rules[166] to provide CLECs with unbundled access to individual optical wavelengths generated by Dense Wave Division Multiplexing ("DWDM") equipment deployed by ILECs in addition to the DS1, DS3, fiber and other high capacity loops that are currently required to be offered on an unbundled basis pursuant to Section 251(c)(3) of the Act.[167] In addition, the Commission asks whether the features, functions and capabilities of the subloop such as various quality of service ("QoS") classes such as Constant Bit Rate ("CBR") and Variable Bit Rate ("VBR") must be made available to competitors even if the ILEC is not itself utilizing such capability, and whether the provision of such access over the same fiber feeder facility presents interference or congestion issues that could lead to service degradation.[168]

The Joint Commenters submit that the Commission should amend its loop unbundling rules to require unbundled access to the loops consisting of optical wavelengths generated by DWDM equipment, in addition to DS1, DS3, fiber, other high capacity loops. Further, the Commission should clarify that as part of their unbundling obligations, the ILEC must provide access to all technically feasible transmission speeds and quality of service classes, including CBR and VBR, even if the ILEC does not offer such QoS classes itself.

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166 47 C.F.R. § 51.319(a)(1).

167 *Fifth FNPRM*, ¶¶120-121.

168 *Id.*, ¶ 125.

A. THE COMMISSION SHOULD AMEND ITS UNBUNDLING RULES TO CLARIFY THAT ILECS MUST PROVIDE UNBUNDLED ACCESS TO ALL FEATURES AND FUNCTIONS OF THE LOOP INCLUDING THOSE FEATURES AND FUNCTIONS PROVIDED BY DWFM FUNCTIONALITY

It is undeniable that the Act does not distinguish among the services that competing carriers may deploy over UNEs. In fact, in establishing the access standards for UNEs, Congress directed the Commission to consider whether "the failure to provide access to such network elements would impair the ability of the *telecommunications carrier seeking access to provide the services that it seeks to offer.*"[169] In other words, CLECs have the discretion to determine what services and technologies they wish to provide over UNEs purchased from the ILEC. Moreover, CLECs have a statutory right to provide any telecommunications service that the UNEs it is buying are technically capable of supporting. In the *UNE Remand Order* the Commission clarified that the technologically neutral underpinnings of the Act inform the loop unbundling obligation. The Commission concluded that ILECs must make available all types of loops, including "all features, functions, and capabilities of the transmission facilities, including dark fiber and attached electronics."[170] The Commission stated that its "intention is to ensure that the loop definition will *apply to new as well as current technologies*, and to ensure that competitors will continue to be able to access loops as an unbundled network element as long as that access is required pursuant to section 251(d)(2) standards."[171]

Obviously, the 251(d)(2) standards are in full force and effect, and accordingly, the Joint Commenters urge the Commission to amend its loop unbundling rules as described

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169 47 U.S.C. § 251(d)(2)(B) (emphasis added).

170 *UNE Remand Order*, ¶ 167.

herein. Moreover, consonant with this request the Joint Commenters urge the Commission to adopt the rule clarifications requested in the ALTS Loop Provisioning Petition:[172]

> • Hold that Rule 51.319 requires ILECs to provide high-capacity loops, including DS-1 and DS-3 level loops, to any requesting CLEC on an unbundled and nondiscriminatory basis;
>
> • Hold that Rule 51.319 requires ILECs to provide entire loops to CLECs providing integrated voice and data services over a shared line;
>
> • Adopt maximum intervals for provisioning of UNE loops and subloop elements;
>
> • Require ILECs to provide nondiscriminatory access to all subloops and subloop components, including intra-building wiring, wherever possible and in a manner that will support provision of multiple services over a shared line;
>
> • Require ILECs to promptly establish reasonable rates for all subloops and subloop components, including intra-building wiring;
>
> • Determine a federal deadline by which all ILEC OSS interfaces must electronically provide all loop information to which the ILEC has access;
>
> • Ensure that all loop de-conditioning charges and other recurring and non-recurring charges adhere to forward-looking, incremental cost principles; and
>
> • Set *prima facie* federal penalties for ILEC failure to comply with these rules.

Only in this way can the Commission assure that the benefits of broadband communications services are competitively available to all Americans as soon as technically and economically feasible.

(...continued)

171 *Id.* (emphasis added).

172 *Pleading Cycle Established for Comments on ALTS Petition for Declaring Ruling: Loop Provisioning*, DA 00-114 (rel. May 24, 2000).

B. CLECs Must Have Access to All Features, Functions and Capabilities of Fiber Subloops, Including All Transmission Speeds and QoS Classes, Including CBR and VBR

As noted above, the Commission sought comment on whether access to all features functions and capabilities of the subloop created by DLC deployment includes "access to all technically feasible transmission speeds and QoS classes such as Constant Bit Rate ("CBR") and real time and non-real time Variable Bit Rate ("VBR") that exist in the attached electronics."[173] In addition, the Commission sought comment "on whether the provision of multiple CBR and or VBR channels, circuits, paths, or connections over the same fiber feeder facility would cause interference or congestion that could lead to service degradation" and "on how to eliminate or control such interference."[174] The Commission also asked whether, in providing access to the features, functions, and capabilities of the subloop, whether ILECs must provide access to all technically feasible transmission speeds and QoS classes even if the incumbent (or any ILEC affiliate) is not itself using such capability.

The Joint Commenters submit that ILECs should be required to provide access to all technically feasible transmission speeds and QoS classes that exist in the attached electronics of the loop. As the Commission recognized in the *Line Sharing Order*, the risk of interference from provision of multiple channels over the same facility is minimal and easily managed.[175] In the *Line Sharing Order* the Commission declined to adopt a federal rule on specific methods of achieving spectrum compatibility and instead deferred to conclusions to be reached by industry

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173 *Fifth FNPRM*, ¶ 125.

174 *Id.*

175 *Line Sharing Order*, ¶ 111-118 (1999).

standards setting bodies.[176] However, the Commission concluded that "use of generic power spectral density ("PSD") masks and/or a calculation-based approach appears to be the best means to address spectrum compatibility. Taken together, these two mechanisms should protect network integrity while maximizing deployment of new competing technologies."[177]

A similar conclusion is reasonable in the context of the subloop. Accordingly, ILECs should be required to provide all transmission speeds and QoS classes even if they do not utilize them themselves. ILECs should not be permitted to hide behind the convenient excuse of service degradation, interference, or congestion without providing the Commission with specific evidence thereof. Therefore, the Joint Commenters submit that the Commission should adopt the same presumption of acceptability for deployment and standards regarding degradation of signals in this proceeding as it did in the *Line Sharing Order*.[178] All service levels should be priced at forward-looking, incremental cost. Where there is imminent risk of inadequate capacity to meet future demand, ILECs should be required to install the appropriate electronics to provide as much capacity on the facility as the loop is practically capable of supporting.

The Act allows CLECs to determine the services they wish to provide over UNEs, subject only to the technology-neutral definitions of the Act. No basis exists within the Act for discriminating against a CLEC based on the service offerings provided by CLEC, or the manner

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176 *Id.*

177 *Id.*

178 In the *Line Sharing Order* the Commission codified rules that govern when a loop technology is presumed acceptable for deployment. The circumstances include when the technology: (1) complies with existing industry standards; (2) has been approved by an industry standards body, the Commission, or any state commission; or (3) has been successfully deployed by any carrier without significantly degrading the performance of other services.

in which the CLEC decides to provide those services. The Commission should make these obligations clear.

VIII. IN ORDER TO FACILITATE SUBLOOP UNBUNDLING, THE COMMISSION SHOULD MODIFY ITS RULES TO CLARIFY THE OBLIGATION OF ILECS TO PROVIDE PHYSICAL COLLOCATION AT ALL REMOTE LOCATIONS, INCLUDING REMOTE TERMINALS, CONTROLLED ENVIRONMENTAL VAULTS, HUTS AND CABINETS

In the *Fifth FNPRM* the Commission seeks comment on whether deployment of new network architectures necessitates any modifications to, or clarification of, its rules.[179] The Joint Commenters submit that the deployment of new network architectures, including fiber transmission facilities, increasingly deeper into the network and closer to the end-user makes necessary the re-examination of the Commission's unbundling and collocation rules. As the comments of competitive providers of advanced services in the Project Pronto proceeding indicated, their ability to obtain nondiscriminatory access to the remote terminal through, principally, collocation is increasingly critical, as the remote terminal gains primacy in the evolving telecommunications network.[180] Indeed, the Commission itself has observed that "the remote terminal has, to a substantial degree, assumed the role and significance traditionally associated with the central office."[181]

As discussed below, the Joint Commenters submit that the Commission should modify its rules to clarify: 1) the obligation to provide physical and virtual collocation at any remote premises; 2) ensure the ability of competitive carriers to cross-connect at any remote

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179 *See Fifth FNPRM,* ¶ 123.

180 *See* ALTS Comments, CC Docket No. 98-141, at 12 (filed Mar. 3, 2000); DATA Comments, CC Docket No. 98-141, at 17 (filed Mar. 3, 2000); Prism Comments, CC Docket No. 98-141, at 16 (filed Mar. 3, 2000).

181 *UNE Remand Order*, ¶ 218.

terminal; 3) provide nondiscriminatory access to OSS interfaces necessary to order subloops; 4) ensure that CLECs have nondiscriminatory access to remote loop testing ability; and 5) adopt rules establishing a "SEEL" consisting of the copper subloop distribution and the fiber feeder with multiplexing.

A. RECENT DEVELOPMENTS UNDERSCORE THE NEED FOR COLLOCATION IN REMOTE TERMINALS

The most recent event highlighting the evolution of the telecommunications network and the need for corresponding Commission rule changes was SBC's announcement of "Project Pronto"[182] and its subsequent petition for modification of the SBC Merger Conditions.[183] The centerpiece of Project Pronto is the deployment of 20,000 new or upgraded remote terminals, in conjunction with the deployment of an overlay network architecture consisting of "Next Generation" digital loop carrier ("NGDLC") systems installed at the remote terminal, as well as the deployment of additional fiber transmission facilities between its central offices and remote terminals.

CLECs, such as xDSL services, must have continued access to copper loop facilities in order to provide advanced services to their customers, as discussed above.[184] Project Pronto and similar initiatives ostensibly will bring advanced services to a larger number of ILEC customers. However, the same architecture that brings fiber closer to end user premises will, by

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182 SBC Communications, Inc., *SBC Launches $ 6 Billion Broadband Initiative* (Oct. 18, 1999) (disseminating information about SBC's Project Pronto initiative to the press) (*SBC Project Pronto Press Release*). *See* Communications Daily, *SBC Details $ 6 Billion Spending Plan to Increase Broadband Access*, 1999 WL 7580611 (Oct. 19, 1999).

183 *See* February 15, 2000, SBC letter requesting an interpretation, waiver, or modification of the *Merger Conditions* to allow its incumbent LECs to own equipment at 2 ("*SBC Waiver Request*").

184 *See* Section III. C.

eliminating or severely diminishing the supply of homerun copper loops, simultaneously threaten the ability of competing providers of advanced services to compete for advanced services customers. As the Commission has acknowledged:

> in cases where the incumbent multiplexes its copper loops at a remote terminal to transport the traffic to the central office over fiber DLC facilities, a requesting carrier's ability to offer xDSL service to customers served over those facilities will be precluded, unless the competitor can gain access to the customer's copper loop before the traffic on that loop is multiplexed.[185]

Unless the Commission amends its rules to ensure both nondiscriminatory access to remote terminals and the maintenance of the existing infrastructure used to reach consumers, the deployment of fiber-fed remote terminals will harm competition and will slow the deployment of advanced services technology in contravention of Sections 251 and 706 of the Act.[186] In order to avoid short-circuiting the deployment of advanced services and technologies, the Commission must ensure that its unbundling and collocation rules do not distinguish between (i) central office-based services and technologies and (ii) remote terminal-based services and technologies. Countenancing ILEC efforts to carve a "remote terminal exception" out of the Act would not only be contrary to the Act's technologically neutral underpinnings, but it would hobble the ability of competing carriers to provide both POTS and advanced services.

In adopting the Order modifying the *SBC/Ameritech Merger Conditions* in which Project Pronto was discussed, the Commission took pains to acknowledge that:

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185 *UNE Remand Order*, ¶ 218.

186 Pub. L. 104-104, 110 Stat. 153, Title VII, § 706 (Feb 8, 1996), *codified at* 47 C.F.R. § 157, Note.

> "we are examining issues relating to competitive access to remote terminals in a general rulemaking proceeding.[187] Although that rulemaking will not alter our determination here to permit SBC's incumbent LECs to own the plug-in cards and associated OCDs [in its remote terminals], SBC will be bound by any rules ultimately developed in that proceeding that affect the way in which SBC's incumbent LECs provide access to remote terminals. Nothing we do in this Order is intended to prejudge in any way the outcome of that rulemaking." [188]

Accordingly, the Joint Commenters ask the Commission to amend its collocation rules as described below.

B. THE ACT AND THE COMMISSION'S COLLOCATION RULES REQUIRE THAT ACCESS TO THE SUBLOOP BE PROVIDED ON A NON-DISCRIMINATORY BASIS

The Act and existing Commission rules impose upon ILECs the duty to provide subloops to any requesting CLEC. This obligation is dual: section 51.319(a)(2) of the Commission's rules requires ILECs to provide "nondiscriminatory access, in accordance with §51.311 and Section 251(c)(3) of the Act, to the local loop and subloop, including inside wiring owned by the incumbent LEC, on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service."[189] Specifically, in the *UNE Remand Order,* the Commission expanded its definition of a loop "to include all features, functions, and capabilities of the transmission facilities, including dark fiber and attached electronics [excluding DSLAMS]."[190] This requirement extends to the subloop, that portion of the loop extending from

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187 *See* In the Matter of Ameritech Corp., Transferor and SBC Communications, Transferee for Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24 25, 63 90, 95 and 101 of the Commission's Rules, CC Docket 98-141, *Second Memorandum Opinion and Order*, FCC 00-336 (rel. Sept. 8, 2000). ("*Project Pronto Order*").

188 *Project Pronto Order*, ¶ 29.

189 47 C.F.R. § 51.319(a)(1).

190 *UNE Remand Order*, ¶ 167; 47 C.F.R. § 51.319(a)(1).

a remote access terminal to the customer's premises, without which carriers cannot "minimize their reliance on the incumbents' facilities" in order to reach customers.[191] The Commission indicated that:

> Incumbents must provide unbundled access to the high frequency portion of the loop at the remote terminal as well as the central office. Our subloop unbundling rules and presumptions allow requesting carriers to access copper wire relatively close to the subscriber, which is critical for a competitive carrier to offer services using xDSL technology over the high frequency network element.[192]

In addition, the Commission has required that ILECs "provide competitors with access to unbundled loops regardless of whether [the ILEC] uses integrated digital loop carrier technology, *or similar remote concentration devices*, for the particular loop sought by a competitor."[193]

The second basis for the requirement that ILECs provide access to the subloop is Section 51.311 of the Commission's rules. Section 51.311 requires that ILECs provide "access to such unbundled network element[s], that [is] at least equal in quality to that which the incumbent LEC provides to itself." However, the ability of competitive carriers of advanced services to obtain the requisite access to the subloop is threatened by Project Pronto-type initiatives. Indeed, in granting the modification to the *SBC Ameritech Merger Conditions*, the Commission acknowledged that "SBC's Advanced Services Affiliate will no longer be seeking collocation in remote terminals on the same terms (or same scale) as it otherwise would have because it will have no need to collocate equipment in remote terminals. As a result, competing

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191 *UNE Remand Order*, ¶ 205; 47 C.F.R. § 51.319(a)(2).

192 *See Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, 14 FCC Rcd 20912, ¶ 91 (Dec. 9, 1999) ("*Line Sharing Order*"); *UNE Remand Order*, at ¶¶ 207, 217-18.

193 *See Local Competition Order*, 11 FCC Rcd 15499, ¶ 383 (1996) (emphasis added); *see UNE Remand Order*, ¶ 218

carriers would effectively lose the right to obtain similar collocation arrangements on nondiscriminatory rates, terms, and conditions."[194]

Accordingly, the Joint Commenters urge the Commission to modify its collocation rules to make crystal clear the obligation that ILECs have to provide collocation at any remote terminal, controlled environmental vault, hut, or cabinet in order to ensure that subloops are accessible to any carrier, for any service, on a just, timely and nondiscriminatory basis.

C. PHYSICAL COLLOCATION AT REMOTE PREMISES IS TECHNICALLY FEASIBLE AND NECESSARY

Collocation at the remote terminal is technically feasible and necessary to achieve the objectives of Sections 251(c)(2) and 251(c)(3). The Commission should amend its rules expressly to recognize this reality. Indeed, in establishing "a rebuttable presumption that the subloop can be unbundled at any accessible terminal in the outside loop plant" the Commission tacitly recognized that remote terminal collocation is technically feasible.[195] The Joint Commenters submit that now the Commission must amend its collocation rules explicitly to require physical collocation at the remote premises.

The Commission already has a sufficient record to amend its rules as the Joint Commenters propose. Indeed, the Commission stated in the *UNE Remand Order* that "we intend

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194 *Project Pronto Order* at ¶ 24. In the *SBC/Ameritech Merger Order* at n.674 the Commission noted that the Advanced Services Affiliate "will wait in line for collocation, petition to open closed offices, and otherwise deal with the same collocation and OSS implementation problems experienced by competitive LECs."

195 *UNE Remand Order*, ¶ 223. In tacitly requiring remote terminal collocation and rejecting ILEC claims that such collocation is not technically feasible, the Commission noted that "incumbent LECs raised similar doubts as to whether collocation would be feasible at central offices. As indicated by the number of collocation arrangements in place today, these doubts were not well-founded." *UNE Remand Order*, ¶ 221.